

6KV6A

Beam Power Tube

NOVAR TYPE

For High-Voltage-Pulse Shunt-Regulator

Applications in Color-TV Receivers

ELECTRICAL CHARACTERISTICS – Bogey Values

| | | |
|--|-----|----|
| Heater Voltage, ac or dc. . . E_h | 6.3 | V |
| Heater Current I_h | 1.6 | A |
| Direct Interelectrode Capacitances: ^a | | |
| Grid No.1 to plate c_{g1-p} | 0.6 | pF |
| Input: G1 to (K,G3,G2,H) . . c_i | 22 | pF |
| Output: P to (K,G3,G2,H) . . c_o | 9.0 | pF |

For the following characteristics, see Conditions below.

| | | | |
|--|------------------|---|-----------------------|
| Amplification Factor μ (Triode Connection) ^b μ | - | 4 | - |
| Plate Resistance (Approx.) . r_p | - | - | 10000 Ω |
| Transconductance g_m | - | - | -6000 μmho |
| DC Plate Current I_b | 440 ^c | - | 40 mA |
| DC Grid-No.2 Current I_{c2} | 30 ^c | - | 2.4 mA |
| Cutoff DC Grid-No.1 Voltage for $I_b = 1 \text{ mA}$. . . $E_{c1(co)}$ | - | - | -42 V |

Conditions:

| | | | | |
|-------------------------------------|-------------|-------|-------|---|
| Heater Voltage E_h | Bogey Value | | | V |
| DC Plate Voltage E_b | 100 | 140 | 140 | V |
| DC Grid-No.3 Voltage . . . E_{c3} | 0 | 0 | 0 | V |
| DC Grid-No.2 Voltage . . . E_{c2} | 140 | 140 | 140 | V |
| DC Grid-No.1 Voltage . . . E_{c1} | 0 | -24.5 | -24.5 | V |

MECHANICAL CHARACTERISTICS

| | |
|----------------------------------|--|
| Dimensional Outline | JEDEC No.12-97 |
| Maximum Overall Length | 3.380in. (85.85 mm) |
| Maximum Seated Length | 3.000in. (76.2 mm) |
| Maximum Diameter | 1.562in. (39.6 mm) |
| Envelope | JEDEC Designation T12 |
| Base ^d | Large-Button Novar 9-Pin with Exhaust Tip (JEDEC Designation E9-88) |

6KV6A

Terminal-Connections Designation JEDEC 9QU
 Type of Cathode Coated Unipotential
 Operating Position Any

MAXIMUM RATINGS – Design-Maximum Values^e

For operation as a High-Voltage-Pulse Shunt-Regulator Tube in Color Television Receivers in a 525-line, 30-frame system.

| | | | |
|---|--------------|--|----|
| DC Plate Supply Voltage | | | |
| ($I_b = 0$ mA) | E_{bb} | 900 | V |
| Peak Positive-Pulse Plate Voltage . . . | e_{bm} | 6500 | V |
| Peak Negative-Pulse Plate Voltage . . . | $-e_{bm}$ | 1500 | V |
| DC Grid-No.3 Voltage | E_{c3} | 75 | V |
| DC Grid-No.2 (Screen-Grid) Voltage . . | E_{c2} | 220 | V |
| Peak Positive-Pulse Grid-No.2 Voltage . | e_{c2m} | 600 | V |
| Grid No.1 (Control-Grid) Voltage: | | | |
| Peak negative-pulse value | $-e_{c1m}$ | 330 | V |
| Negative dc value (bias). | $-E_{c1}$ | 250 | V |
| Heater-Cathode Voltage: | | | |
| Peak | e_{hkm} | $\begin{cases} +200 \\ -500 \end{cases}$ | V |
| Average ^g | $E_{hk(av)}$ | 100 | V |
| Heater Voltage | E_h | 5.7 to 6.9 | V |
| Cathode Current: | | | |
| Peak | i_{km} | 950 | mA |
| Average ^g | $I_{k(av)}$ | 275 | mA |
| Grid-No.2 Input | P_{g2} | 2.0 | W |
| Plate Dissipation ^h | P_b | 28 ^k | W |
| Envelope Temperature (at hottest point on envelope surface) | | | |
| | T_E | 240 | °C |

MAXIMUM CIRCUIT VALUE

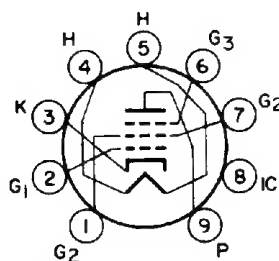
| | | |
|---|---------------|------|
| Grid-No.1-Circuit Resistance: | $R_{g1(ckt)}$ | |
| For grid-No.1-resistor-bias operation | | 1 MΩ |

6KV6A

- ^a Measured without external shield in accordance with the current issue of EIA Standard RS-191.
- ^b With grid No.3 and grid No.2 connected, respectively, to cathode and plate at socket.
- ^c This value can be measured by a method involving a recurrent waveform such that the Maximum Ratings of the tube will not be exceeded.
- ^d Designed to mate with "Novar 9-Contact" Socket generally available from your local RCA Distributor.
- ^e As defined in the current issue of EIA Standard RS-239.
- ^f This rating is applicable where the duration of the voltage pulse does not exceed 15% of one horizontal scanning cycle. In a 525-line, 30-frame system, 15% of one horizontal scanning cycle is 10 μ s.
- ^g Measured with a dc meter.
- ^h Adequate circuit precautions must be taken to protect the tube in the absence of grid-No.1 bias.
- ^k Plate dissipations up to 32W maximum are permissible for short periods of time provided the maximum envelope-temperature rating is not exceeded. This condition may exist under high-line voltage, zero picture tube beam current.

TERMINAL DIAGRAM — Bottom View

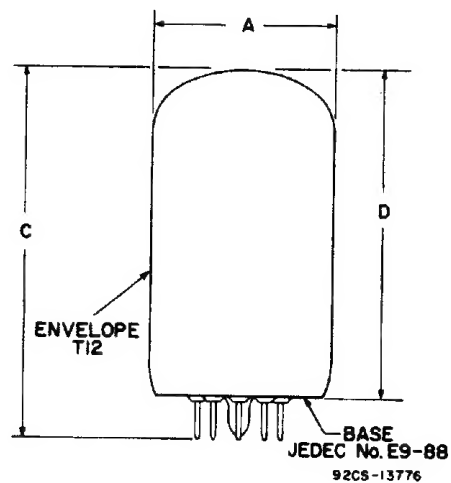
- Pin 1 - Grid No.2
Pin 2 - Grid No.1
Pin 3 - Cathode
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Grid No.3
Pin 7 - Grid No.2
Pin 8 - Do Not Use
Pin 9 - Plate



JEDEC 9QU

6KV6A

DIMENSIONAL OUTLINE — JEDEC No. 12-97



| DIMENSION | INCHES | | MILLIMETERS | |
|---|--------|-------|-------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 1.438* | 1.562 | 36.6* | 39.6 |
| C | — | 3.380 | — | 85.85 |
| D | 2.750 | 3.000 | 69.9 | 76.2 |
| MILLIMETER DIMENSION DERIVED FROM INCH DIMENSION | | | | |
| * Applies to the minimum diameter except in the area of the seal. | | | | |